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(54) **CARBON NANOTUBE DEVICE WITH N-TYPE END-BONDED METAL CONTACTS**

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(57) **ABSTRACT**

A field effect transistor includes a substrate and a gate dielectric formed on the substrate. A channel material is formed on the gate dielectric. The channel material includes carbon nanotubes. A patterned resist layer has openings formed therein. The openings expose portions of the gate dielectric and end portions of the channel material under the patterned resist layer. Metal contacts are formed at least within the openings. The metal contacts include a portion that contacts the end portions of the channel material and the portions of the gate dielectric exposed within the openings.